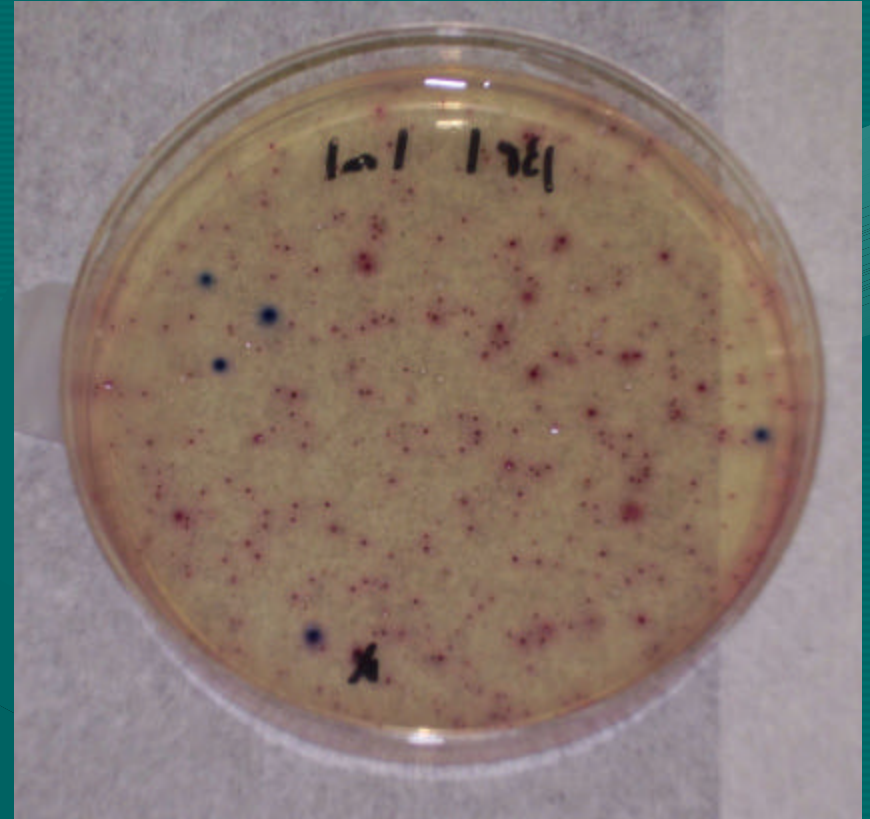


Coliscan Easygel

How Volunteer Monitoring Can Help
The TMDL Process

What Is Coliscan

- An inexpensive and easy to use media to test for E. coli
- Testing does not require a laboratory environment
- No specialized skills or equipment necessary
- Nearly as accurate as traditional laboratory methods
- Approved by EPA Region 4 for surface water monitoring by Alabama Water Watch



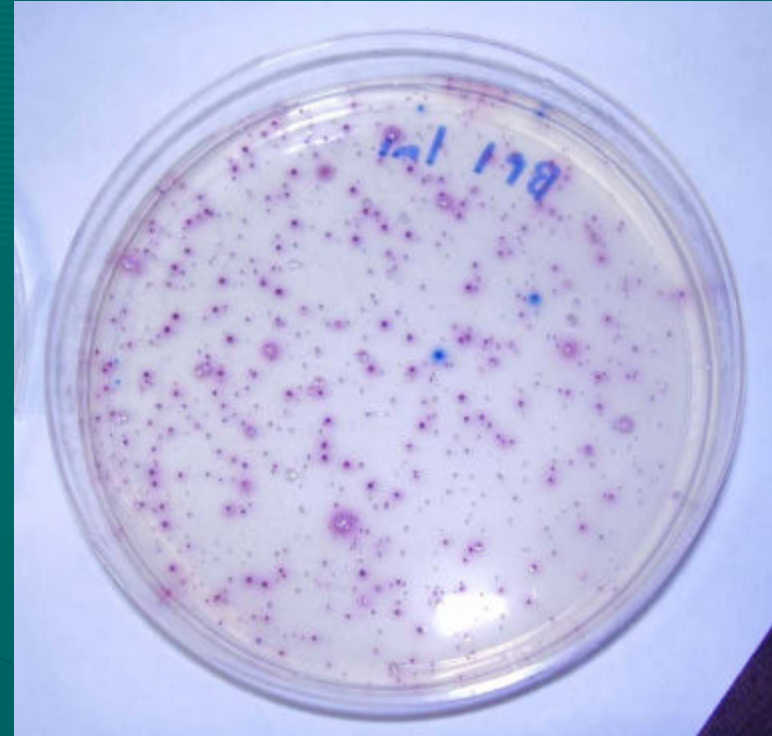
1 ml sample with 5 E. coli colonies

Steps For Using Coliscan

- Collection of samples using sterile sample bottles
- A known quantity of sample (0.5 – 5.0 ml) is placed into a bottle of thawed Coliscan media and mixed
- The prepared media goes into a pretreated Petri dish to turn the liquid media into a gel
- Incubation of the Petri Dishes occurs for 24 hours at 35 - 40° C
- Plates are removed from the incubator and scored

QA Of Coliscan Media

- Media contains inhibitors for non-coliform bacteria
- Two proprietary stains are present in the media
- Coliform bacteria turn red and E. coli stain blue
- E. coli colonies appear dark blue to purple



1 ml sample with 6 E. coli colonies

Sample Results From DEQ/DCLS Comparison Study

Station	DEQ/DCLS	Coliscan
North River	2250	2,270
Willis River	460	400
Appomattox River	130	200
Spring Creek	70	30
Buffalo Creek	130	230
Saylers Creek	210	130
Big Guinea Creek	510	170

The Project

- \$5,000 provided by the DEQ TMDL program to pay for Coliscan monitoring by volunteer groups
- Volunteers monitor in TMDL watersheds that have a pending or approved IP
- Data will help track TMDL BMP performance and locate E. coli “hot spots” along tributaries
- Volunteers sample at 10 or more sites in the watershed at least once every month for a year
- Results reported to DEQ on a quarterly basis and forwarded to TMDL staff

What DEQ Provides To Each Volunteer Group

- 14 Coliscan kits (140 samples worth)
- Sampling equipment (Sterile bottles, pipettes, etc.)
- Incubator
- Coolers, markers, tape, disinfectant
- Hands on training



Typical equipment for volunteers

Current Coliscan Watersheds

- Blacks Run and Cooks Creek-Rockingham
- Christians Creek-Augusta
- Four Mile Run- City of Alexandria
- Hawksbill Run- Page
- Holman's Creek-Shenandoah
- Mechumps Creek-Hanover
- Opequon and Abrams Creek- Frederick
- Pamunkey River- King William
- Rattlesnake Creek*- City of Richmond
- Three Creeks TMDL-Washington
- Thumb Run- Fauquier
- Upper Powell River-Wise

Current Coliscan Partners*

- Seven citizen volunteer groups
- Five high schools
- Two colleges
- Four SWCD
- Two TMDL IP committees
- One PDC

* Some TMDL watersheds have more than one partner who work as a team

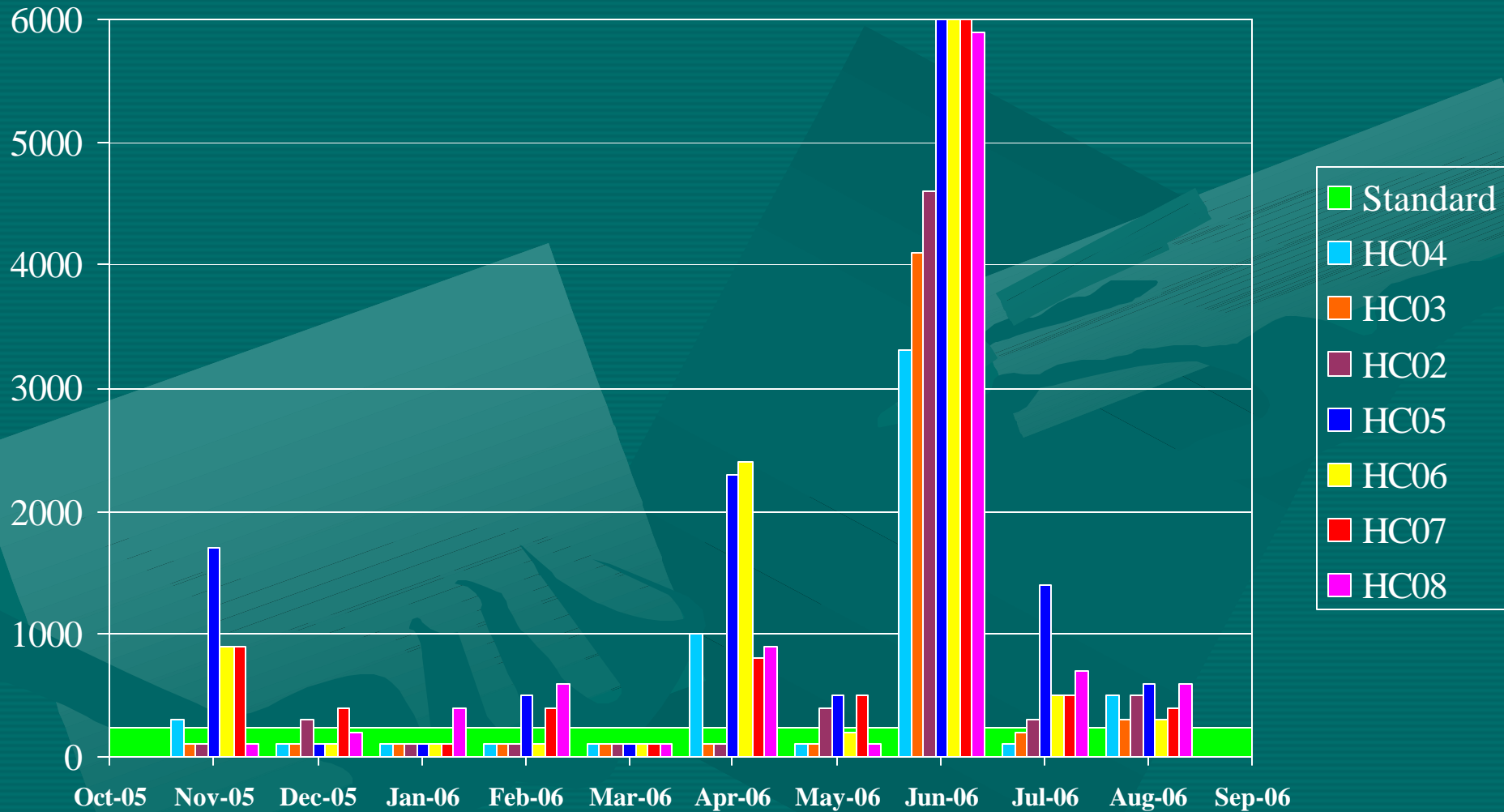


Volunteer learning about Coliscan

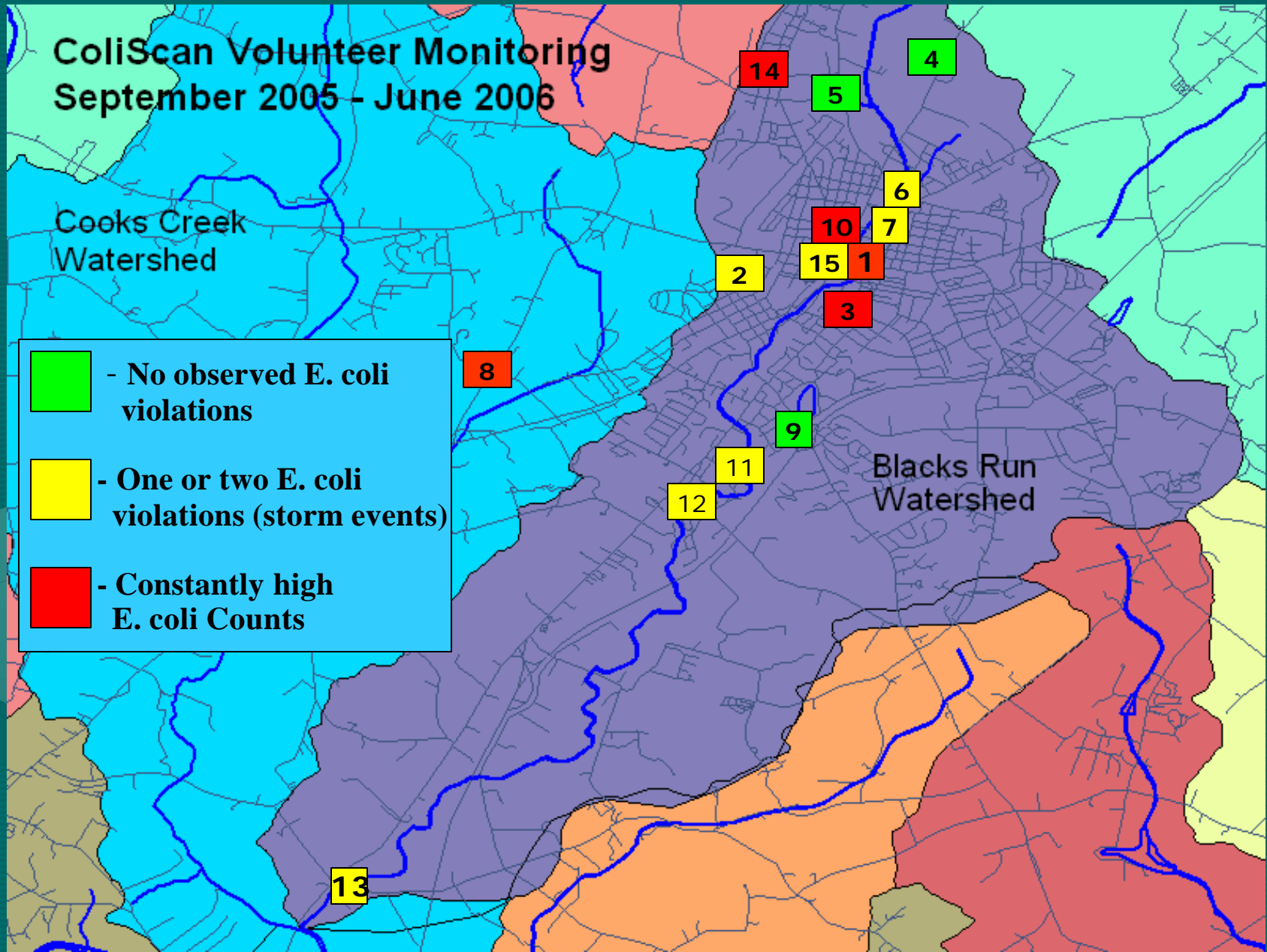
Sample Results



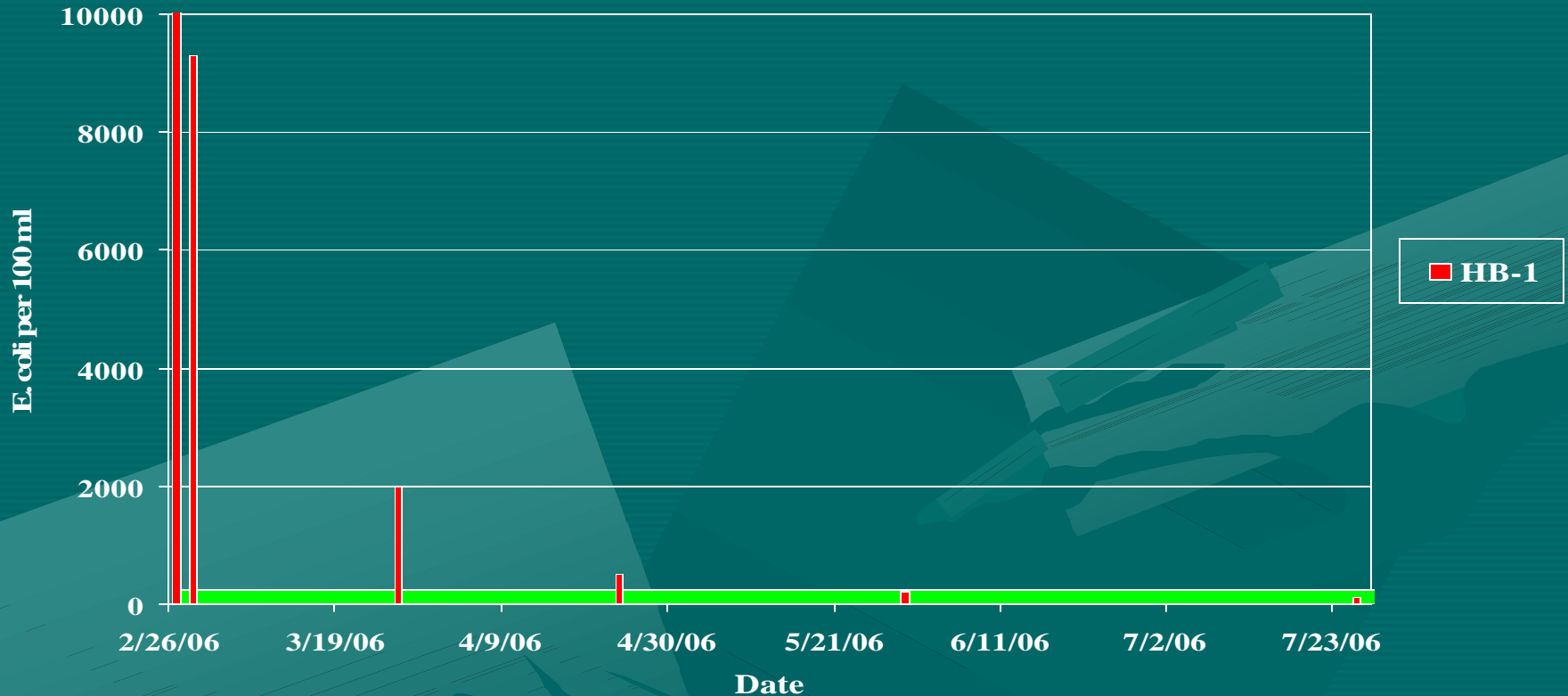
Holman's Creek Data



Cooks Creek and Blacks Run Stations and Status



Three Creeks Watershed



- Coliscan monitoring began in February 2006
- Site HB-01 showed high bacteria counts (17600 CFU)
- A broken sewer line was identified as the source
- Line repaired in early April

Year Two Plans

- \$5,000 renewal from the DEQ TMDL program
- Continue work in current watersheds with a new round of media
- Approach four new groups to start Coliscan monitoring in TMDL IP watersheds
- New groups will be in WCRO and SCRO
- By end of year two we will receive data from 16 TMDL IP watersheds

For More Information

Contact

James Beckley

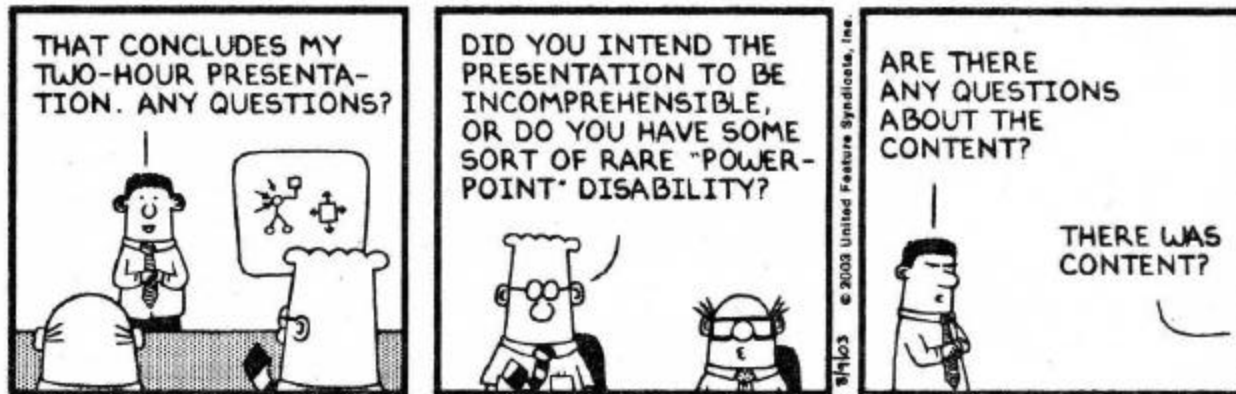
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DILBERT

By Scott Adams



Questions